

REMARKS

Reconsideration of the above-referenced application in view of the above amendment, and of the following remarks, is respectfully requested.

Claims 1-5, 7, 8, 10, 12-13, and 24 are pending in this case. Claims 1, 12, and 24 are amended herein.

The Examiner rejected claims 1-5, 7, 8, 10, and 24 under 35 U.S.C. 102(b) as being anticipated by Davis et al. (U.S. Pub. 2003/0197280).

Applicant respectfully submits that claim 1 is unanticipated by Davis as there is no disclosure or suggestion in Davis of at least one support structure disposed in each of the ILD layers, at least one additional ILD layer, and a contact layer overlying the at least one additional ILD layer and the support structures, wherein the at least one additional ILD layer isolates the contact layer from the support structures. Davis teaches ILD layers 61, 65, 69 and support structures 47 therein. Davis also teaches a dielectric layer 73. However, dielectric layer 73 does not satisfy the claimed additional ILD layer because a contact layer does not overlie dielectric layer 73 and dielectric layer 73 does not isolate the contact layer from the support structures. As discussed in paragraph 33 of Davis, metal lines 37-38 and metal pads 45 are formed out of the final metal layer 71 (located below dielectric layer 73 rather than over it). In Davis, the support structures 47 are connected to the final metal layer 71 rather than isolated from it by an additional ILD layer as claimed. Davis does not disclose or suggest a contact layer overlying the at least one additional ILD layer and the support structures, wherein the at least one additional ILD layer isolates the contact layer from the support

structures. Accordingly, Applicant respectfully submits that claim 1 and the claims dependent thereon are unanticipated by Davis.

Applicant respectfully submits that claim 24 is unanticipated by Davis as there is no disclosure or suggestion in Davis of at least one additional ILD layer having a dielectric constant which is higher than the low-k ILD layers overlying the low-k inter-level dielectric layers and a bond pad overlying the at least one additional ILD layer and the support structures. As discussed above, Davis teaches forming the metal pads 45 out of the final metal layer 71 which is located under rather than over an additional ILD layer. Accordingly, Applicant respectfully submits that claim 24 is unanticipated by Davis.

The Examiner rejected claims 12 and 13 under 35 U.S.C. 102(b) as being anticipated by Tsau (U.S. Pub. 2002/0038903).

Applicant respectfully submits that claim 12 is unanticipated by Tsau as there is no disclosure or suggestion in Tsau of support structures overlying each other in the plurality of layers to mitigate damage of the semiconductor device caused by stresses to the ILD layers or of at least one additional ILD layer and a contact layer overlying the at least one additional ILD layer, wherein the at least one additional ILD layer isolates the contact layer from the support structures. Tsau teaches a capacitor structure and a multilayer metal interconnect structure. Tsau does not teach support structures isolated from the contact layer as claimed. Instead Tsau teaches an interconnect structure which is electrically connected to the overlying contact layer 170. In fact, Tsau does not actually teach support structures to mitigate damage but merely a multi-level metal interconnect to provide electrical connection. Accordingly, Applicant respectfully submits that claim 12 and claim 13 dependent thereon are unanticipated by Tsau.

In light of the above, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance of claims 1-5, 7, 8, 10, 12-13, and 24. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that

the Examiner contact Applicant's attorney at the below listed telephone number and address.

Respectfully submitted,

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